

Semen Mikhailenko

List of Publications by Year in descending order

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#	ARTICLE	IF	CITATIONS
1	The HITRAN2020 molecular spectroscopic database. Journal of Quantitative Spectroscopy and Radiative Transfer, 2022, 277, 107949.	1.1	770
2	High Resolution Infrared Spectroscopy in Support of Ozone Atmospheric Monitoring and Validation of the Potential Energy Function. Molecules, 2022, 27, 911.	1.7	10
3	Cavity ring down spectroscopy of water vapour near 750 nm: a test of the HITRAN2020 and W2020 line lists. Molecular Physics, 2022, 120, .	0.8	8
4	Nonpolynomial Representation of N ₂ , O ₂ -, Air-, and Self-Broadening Coefficients of Ozone Lines. Atmospheric and Oceanic Optics, 2021, 34, 293-301.	0.6	0
5	Infrared spectra of 16O ₃ in the 900 - 5600 cm ⁻¹ range revisited: Empirical corrections to the S&MPO and HITRAN2020 line lists. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 276, 107936.	1.1	12
6	Towards the intensity consistency of the ozone bands in the infrared range: Ab initio corrections to the S&MPO database. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 272, 107801.	1.1	14
7	Water vapor absorption in the region of the oxygen A-band near 760 nm. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 275, 107847.	1.1	17
8	Validation tests of the W2020 energy levels of water vapor. Journal of Quantitative Spectroscopy and Radiative Transfer, 2021, 276, 107914.	1.1	5
9	The far-infrared spectrum of 18O enriched water vapour (400-700 cm ⁻¹). Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 253, 107105.	1.1	5
10	High resolution infrared spectrum of 16O ₃ : The 3600-4300 cm ⁻¹ range reinvestigated. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 244, 106823.	1.1	16
11	Water vapor absorption between 5690 and 8340 cm ⁻¹ : Accurate empirical line centers and validation tests of calculated line intensities. Journal of Quantitative Spectroscopy and Radiative Transfer, 2020, 245, 106840.	1.1	14
12	New transitions and energy levels of water vapor by high sensitivity CRDS near 1.73 and 1.54 μm. Journal of Quantitative Spectroscopy and Radiative Transfer, 2019, 236, 106574.	1.1	8
13	Ab initio predictions and laboratory validation for consistent ozone intensities in the MW, 10 and 5 μm ranges. Journal of Chemical Physics, 2019, 150, 184303.	1.2	37
14	Cavity ring down spectroscopy of 17O enriched water vapor near 1.73 μm. Journal of Quantitative Spectroscopy and Radiative Transfer, 2019, 222-223, 229-235.	1.1	12
15	Comb-Assisted Cavity Ring Down Spectroscopy of 17O enriched water between 6667 and 7443 cm ⁻¹ . Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 206, 163-171.	1.1	24
16	Analysis of Rotational-Vibrational Transition Frequencies of the HCl Molecule and Its RKR Potentials in the Ground Electronic State. Optics and Spectroscopy (English Translation of Optika i Spektroskopiya) 10(10) 137-142 (2018)	1.1	10
17	CRDS absorption spectrum of 17O enriched water vapor in the 12,277-12,894 cm ⁻¹ range. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 221, 233-242.	1.1	9
18	Study of H ₂ 16O and H ₂ 18O absorption in the 16,460-17,200 cm ⁻¹ range using LED-based Fourier transform spectroscopy. Journal of Quantitative Spectroscopy and Radiative Transfer, 2018, 217, 170-177.	1.1	10

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19	The absorption spectrum of water vapor in the 2.2 μ m transparency window: High sensitivity measurements and spectroscopic database. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 189, 407-416.	1.1	9
20	Comb-assisted cavity ring down spectroscopy of ^{17}O enriched water between 7443 and 7921 cm^{-1} . Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 203, 206-212.	1.1	37
21	The HITRAN2016 molecular spectroscopic database. Journal of Quantitative Spectroscopy and Radiative Transfer, 2017, 203, 3-69.	1.1	2,840
22	RKR potentials of HCl isotopologues in the ground electronic state. , 2017, , .		0
23	Seven years of IASI ozone retrievals from FORLI: validation with independent total column and vertical profile measurements. Atmospheric Measurement Techniques, 2016, 9, 4327-4353.	1.2	50
24	Improved Dunham coefficients of HCl isotopologues. , 2016, , .		0
25	CRDS of ^{17}O enriched water between 5850 and 6671 cm^{-1} : More than 1000 energy levels of H ^{217}O and HD ^{17}O newly determined. Journal of Quantitative Spectroscopy and Radiative Transfer, 2016, 177, 108-116.	1.1	13
26	A spectroscopic database for water vapor between 5850 and 8340 cm^{-1} . Journal of Quantitative Spectroscopy and Radiative Transfer, 2016, 179, 198-216.	1.1	26
27	The 2015 edition of the GEISA spectroscopic database. Journal of Molecular Spectroscopy, 2016, 327, 31-72.	0.4	311
28	Inventory of data included in HITRAN2012 edition for water vapor between 6450 and 9400 cm^{-1} . Journal of Molecular Spectroscopy, 2016, 327, 159-170.	0.4	4
29	GOSAT-2014 methane spectral line list. Journal of Quantitative Spectroscopy and Radiative Transfer, 2015, 154, 63-71.	1.1	48
30	LED-based Fourier transform spectroscopy of H ^{218}O in the 15,000–16,000 cm^{-1} range. Journal of Quantitative Spectroscopy and Radiative Transfer, 2015, 156, 36-46.	1.1	12
31	RKR potentials of isotopologues of the CO molecule. Optics and Spectroscopy (English Translation of) Tj ETQq1 1 0,784314 rgBT /Ov 0,2		
32	Hot water emission spectra: Rotational energy levels of the (000) and (010) states of HD ^{17}O . Journal of Molecular Spectroscopy, 2015, 308-309, 6-19.	0.4	9
33	The absorption spectrum of water vapor in the 1.25 μ m atmospheric window (7911–8337 cm^{-1}). Journal of Quantitative Spectroscopy and Radiative Transfer, 2015, 157, 135-152.	1.1	25
34	An accurate and complete empirical line list for water vapor between 5850 and 7920 cm^{-1} . Journal of Quantitative Spectroscopy and Radiative Transfer, 2014, 140, 48-57.	1.1	20
35	Water vapor line parameters from 6450 to 9400 cm^{-1} . Journal of Quantitative Spectroscopy and Radiative Transfer, 2014, 136, 119-136.	1.1	34
36	S&MPO – An information system for ozone spectroscopy on the WEB. Journal of Quantitative Spectroscopy and Radiative Transfer, 2014, 145, 169-196.	1.1	66

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37	The HITRAN2012 molecular spectroscopic database. Journal of Quantitative Spectroscopy and Radiative Transfer, 2013, 130, 4-50.	1.1	2,810
38	LED-based Fourier-transform spectroscopy of H ₂ 18O in the range 15000–15700 cm ⁻¹ . Optics and Spectroscopy (English Translation of Optika i Spektroskopiya), 2013, 115, 814-822.	0.2	7
39	Ozone spectroscopy in the electronic ground state: High-resolution spectra analyses and update of line parameters since 2003. Journal of Quantitative Spectroscopy and Radiative Transfer, 2013, 130, 172-190.	1.1	63
40	An improved line list for water vapor in the 1.5-μm transparency window by highly sensitive CRDS between 5852 and 6607 cm ⁻¹ . Journal of Quantitative Spectroscopy and Radiative Transfer, 2013, 130, 69-80.	1.1	33
41	CRDS of water vapor at 0.1 Torr between 6886 and 7406 cm ⁻¹ . Journal of Quantitative Spectroscopy and Radiative Transfer, 2012, 113, 2155-2166.	1.1	36
42	The absorption spectrum of H ₂ 18O in the range 13400–14460 cm ⁻¹ . Optics and Spectroscopy (English Translation of Optika i Spektroskopiya), 2013, 115, 814-822.	0.2	7
43	Absorption spectrum of deuterated water vapor enriched by 18O between 6000 and 9200 cm ⁻¹ . Journal of Quantitative Spectroscopy and Radiative Transfer, 2012, 113, 653-669.	1.1	43
44	High resolution Fourier transform spectroscopy of HD16O: Line positions, absolute intensities and self broadening coefficients in the 8800–11,600 cm ⁻¹ spectral region. Journal of Quantitative Spectroscopy and Radiative Transfer, 2012, 113, 878-888.	1.1	11
45	Fourier transform measurements of H ₂ 18O and HD18O in the spectral range 1000–2300 cm ⁻¹ . Journal of Quantitative Spectroscopy and Radiative Transfer, 2012, 113, 859-869.	1.1	18
46	Global Multi-isotopologue fit of measured rotation and vibration–rotation line positions of CO in X ¹ Σ ⁺ state and new set of mass-independent Dunham coefficients. Journal of Quantitative Spectroscopy and Radiative Transfer, 2012, 113, 1643-1655.	1.1	35
47	The absorption spectrum of water in the 1.25-μm transparency window (7408–7920 cm ⁻¹). Journal of Molecular Spectroscopy, 2011, 269, 92-103.	0.4	43
48	The 2009 edition of the GEISA spectroscopic database. Journal of Quantitative Spectroscopy and Radiative Transfer, 2011, 112, 2395-2445.	1.1	306
49	(000) and (010) energy levels of the HD18O and molecules from analysis of their 1/2 bands. Journal of Molecular Spectroscopy, 2011, 265, 26-38.	0.4	23
50	The absorption spectrum of water between 13540 and 14070 cm ⁻¹ : ICLAS detection of weak lines and a complete line list. Journal of Molecular Spectroscopy, 2011, 265, 106-109.	0.4	7
51	Critical evaluation of measured pure-rotation and rotation-vibration line positions and an experimental dataset of energy levels of 12C16O in X ¹ Σ ⁺ state. Journal of Quantitative Spectroscopy and Radiative Transfer, 2010, 111, 1106-1116.	1.1	26
52	Line positions and energy levels of the 18O substitutions from the HDO/D ₂ O spectra between 5600 and 8800 cm ⁻¹ . Journal of Quantitative Spectroscopy and Radiative Transfer, 2010, 111, 2185-2196.	1.1	15
53	GOSAT-2009 methane spectral line list in the 5550–6236 cm ⁻¹ range. Journal of Quantitative Spectroscopy and Radiative Transfer, 2010, 111, 2211-2224.	1.1	79
54	IUPAC critical evaluation of the rotational–vibrational spectra of water vapor. Part II. Journal of Quantitative Spectroscopy and Radiative Transfer, 2010, 111, 2160-2184.	1.1	178

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55	Broadening and shifting of vibrational-rotational lines corresponding to the highly excited rotational states of the water molecule. Optics and Spectroscopy (English Translation of Optika I) Tj ETQq1 1 0.784814 rgBT4Overlo		
56	Critical evaluation of measured rotation-vibration transitions and an experimental dataset of energy levels of HD18O. Journal of Quantitative Spectroscopy and Radiative Transfer, 2009, 110, 597-608.	1.1	30
57	The HITRAN 2008 molecular spectroscopic database. Journal of Quantitative Spectroscopy and Radiative Transfer, 2009, 110, 533-572.	1.1	3,129
58	IUPAC critical evaluation of the rotational-vibrational spectra of water vapor. Part I Energy levels and transition wavenumbers for H217O and H218O. Journal of Quantitative Spectroscopy and Radiative Transfer, 2009, 110, 573-596.	1.1	188
59	Isotopic substitution shifts in methane and vibrational band assignment in the 5560-6200 cm ⁻¹ region. Journal of Quantitative Spectroscopy and Radiative Transfer, 2009, 110, 964-973.	1.1	37
60	The GEISA spectroscopic database: Current and future archive for Earth and planetary atmosphere studies. Journal of Quantitative Spectroscopy and Radiative Transfer, 2008, 109, 1043-1059.	1.1	161
61	ICLAS of water in the 770nm transparency window (12746-13558cm ⁻¹). Comparison with current experimental and calculated databases. Journal of Quantitative Spectroscopy and Radiative Transfer, 2008, 109, 2832-2845.	1.1	21
62	Water vapor absorption line intensities in the 1900-6600cm ⁻¹ region. Journal of Quantitative Spectroscopy and Radiative Transfer, 2008, 109, 2687-2696.	1.1	18
63	Update of line parameters of ozone in the 2550-2900 cm ⁻¹ region. Applied Optics, 2008, 47, 4612.	2.1	6
64	Fourier transform measurements of water vapor line parameters in the 4200-6600cm ⁻¹ region. Journal of Quantitative Spectroscopy and Radiative Transfer, 2007, 105, 326-355.	1.1	117
65	Weak water absorption lines around 1.455 and 1.6614μm by CW-CRDS. Journal of Molecular Spectroscopy, 2007, 244, 170-178.	0.4	67
66	<title>Analysis of (030),(110), and (011) interacting states of D ₂ O from hot temperature emission spectra</title>. , 2006, , .		2
67	<title>The procedure of determination of diatomic spectroscopic and molecular parameters from line positions of several isotopomers</title>. , 2006, 6522, 24.		0
68	The 2003 edition of the GEISA/IASI spectroscopic database. Journal of Quantitative Spectroscopy and Radiative Transfer, 2005, 95, 429-467.	1.1	146
69	Analysis of the first triad of interacting states (020), (100), and (001) of D216O from hot emission spectra. Journal of Molecular Spectroscopy, 2005, 233, 32-59.	0.4	35
70	Rotational levels of the (000) and (010) states of D216O from hot emission spectra in the 320-860cm ⁻¹ region. Journal of Molecular Spectroscopy, 2004, 224, 32-60.	0.4	50
71	High sensitivity CW-cavity ring down spectroscopy of water in the region of the 1.514μm atmospheric window. Journal of Molecular Spectroscopy, 2004, 227, 90-108.	0.4	151
72	Spectroscopic parameters for ozone and its isotopes: recent measurements, outstanding issues, and prospects for improvements to HITRAN. Journal of Quantitative Spectroscopy and Radiative Transfer, 2003, 82, 207-218.	1.1	24

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73	(000) and (010) States of : analysis of rotational transitions in hot emission spectrum in the region. Journal of Molecular Spectroscopy, 2003, 217, 195-211.	0.4	37
74	Water Spectra in the Region 4200â€“6250 cm ⁻¹ , Extended Analysis of $\hat{1}\frac{1}{2}1 + \hat{1}\frac{1}{2}2$, $\hat{1}\frac{1}{2}2 + \hat{1}\frac{1}{2}3$, and $3\hat{1}\frac{1}{2}2$ Bands and Confirmation of Highly Excited States from Flame Spectra and from Atmospheric Long-Path Observations. Journal of Molecular Spectroscopy, 2002, 213, 91-121.	0.4	68
75	Extended Analysis of Line Positions and Intensities of Ozone Bands in the 2900â€“3400 cm ⁻¹ Region. Journal of Molecular Spectroscopy, 2002, 215, 29-41.	0.4	24
76	Isotopically invariant dunham parameters and the potential function of the HCl molecule. Optics and Spectroscopy (English Translation of Optika I Spektroskopiya), 2002, 92, 871-876.	0.2	5
77	Title is missing!. Journal of Physics B: Atomic, Molecular and Optical Physics, 2000, 33, 2141-2152.	0.6	9
78	The 1997 spectroscopic GEISA databank. Journal of Quantitative Spectroscopy and Radiative Transfer, 1999, 62, 205-254.	1.1	237
79	New Analysis of $2\hat{1}\frac{1}{2}1 + \hat{1}\frac{1}{2}2$, $\hat{1}\frac{1}{2}1 + \hat{1}\frac{1}{2}2 + \hat{1}\frac{1}{2}3$, and $\hat{1}\frac{1}{2}2 + 2\hat{1}\frac{1}{2}3$ Bands of Ozone in the 2600â€“2900 cm ⁻¹ Region. Journal of Molecular Spectroscopy, 1999, 196, 93-101.	0.4	23
80	First Study of the $v_2 = 3$ Dyad {(130), (031)} of Ozone through the Analysis of Hot Bands in the 2300â€“2600 cm ⁻¹ Region. Journal of Molecular Spectroscopy, 1998, 187, 70-74.	0.4	11
81	Analysis of high resolution measurements of the $2\hat{1}\frac{1}{2}1 + 3\hat{1}\frac{1}{2}3$ band of ozone: Coriolis interaction with the $\hat{1}\frac{1}{2}1 + 3\hat{1}\frac{1}{2}2 + 2\hat{1}\frac{1}{2}3$ band. Journal of Quantitative Spectroscopy and Radiative Transfer, 1998, 59, 185-194.	1.1	25
82	Analysis of experimental data for the first hexad {(040), (120), (200), (002), (021), (101)} of H ₂ O molecule interacting states. Journal of Molecular Structure, 1998, 442, 39-53.	1.8	9
83	New analysis of experimental data for the second hexad (050), (130), (210), (012), (031), (111) of H ₂ O molecule interacting states. Journal of Molecular Structure, 1998, 449, 39-51.	1.8	7
84	The $2\hat{1}\frac{1}{2}2$ and $3\hat{1}\frac{1}{2}2 \sim \hat{1}\frac{1}{2}2$ bands of ozone. Spectrochimica Acta - Part A: Molecular and Biomolecular Spectroscopy, 1998, 54, 1935-1945.	2.0	22
85	Infrared high-resolution spectra of ozone in the range 5500-: analysis of and bands. Journal of Physics B: Atomic, Molecular and Optical Physics, 1998, 31, 2559-2569.	0.6	20
86	Analysis of the $2\hat{1}\frac{1}{2}1 + \hat{1}\frac{1}{2}2 + 2\hat{1}\frac{1}{2}3$ Band of Ozone. Journal of Molecular Spectroscopy, 1997, 182, 333-341.	0.4	28
87	The $2\hat{1}\frac{1}{2}2$ Band of Water: Analysis of New FTS Measurements and High-Ka Transitions and Energy Levels. Journal of Molecular Spectroscopy, 1997, 184, 330-349.	0.4	32
88	First Observation of the $v_2 = 3$ State of Ozone: The (131) State Through Analysis of Cold and Hot Bands. Journal of Molecular Spectroscopy, 1997, 184, 448-453.	0.4	14
89	Infrared Spectrum of Ozone in the 4600 and 5300 cm ⁻¹ Regions: High Order Accidental Resonances through the Analysis of $\hat{1}\frac{1}{2}1 + 2\hat{1}\frac{1}{2}2 + 3\hat{1}\frac{1}{2}3 \sim \hat{1}\frac{1}{2}2$, $\hat{1}\frac{1}{2}1 + 2\hat{1}\frac{1}{2}2 + 3\hat{1}\frac{1}{2}3$, and $4\hat{1}\frac{1}{2}1 + \hat{1}\frac{1}{2}3$ Bands. Journal of Molecular Spectroscopy, 1997, 185, 408-416.	0.4	27
90	Line Positions and Intensities of the $\hat{1}\frac{1}{2}1 + \hat{1}\frac{1}{2}2 + 3\hat{1}\frac{1}{2}3$, $\hat{1}\frac{1}{2}2 + 4\hat{1}\frac{1}{2}3$, and $3\hat{1}\frac{1}{2}1 + 2\hat{1}\frac{1}{2}2$ Bands of Ozone. Journal of Molecular Spectroscopy, 1996, 180, 227-235.	0.4	44

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91	The $\hat{1}/2_1 + \hat{1}/2_2 + 2\hat{1}/2_3$ and $\hat{1}/2_2 + 3\hat{1}/2_3$ Bands of $^{16}\text{O}_3$. Journal of Molecular Spectroscopy, 1995, 174, 510-519.	0.4	26
92	Calculation of High Rotation Energies of the Water Molecule Using the Generating Function Model. Journal of Molecular Spectroscopy, 1995, 170, 38-58.	0.4	26
93	Analysis of the $2\hat{1}/2_1 + 2\hat{1}/2_2 + \hat{1}/2_3$ Band of Ozone. Journal of Molecular Spectroscopy, 1995, 171, 583-588.	0.4	41
94	Application of Pade-forms for fitting and calculating of high-lying rotation-vibration energy levels in diatomic molecules. , 1994, , .		0
95	Experimental and theoretical study of absolute intensities of ozone spectral lines in the range $1850\hat{\text{a}}\text{e}^{\text{c}}2300\text{ cm}^{-1}$. Journal of Quantitative Spectroscopy and Radiative Transfer, 1994, 52, 341-355.	1.1	32
96	Line Positions and Intensities of the $\hat{1}/2_1 + 2\hat{1}/2_2 + \hat{1}/2_3$ and $2\hat{1}/2_2 + 2\hat{1}/2_3$ Bands of $^{16}\text{O}_3$. Journal of Molecular Spectroscopy, 1994, 166, 365-371.	0.4	32
97	New measurements and analysis of the high-resolution water vapor spectrum in the region of ν_1 , ν_3 , and $2\nu_2$ bands. , 1994, 2205, 264.		2
98	Effective dipole-moment operator for nonrigid H_2X -type molecules. Application to H_2O . Journal of Molecular Structure, 1992, 271, 119-131.	1.8	7
99	Application of the pade-form hamiltonians for processing of vibration-rotation spectra of diatomic and triatomic molecules. Journal of Molecular Structure, 1990, 218, 291-296.	1.8	4